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12 Canon U.S.A., Inc. and Defendant Canon Inc.

13 **UNITED STATES DISTRICT COURT**
14 **CENTRAL DISTRICT OF CALIFORNIA**
15 **WESTERN DIVISION**

16
17 CALIFORNIA INSTITUTE OF
18 TECHNOLOGY

19 Plaintiff,

20 v.

21 CANON U.S.A., INC., CANON INC.,
22 NIKON, INC., NIKON CORP.,
OLYMPUS AMERICA, INC.,
23 OLYMPUS CORP., PANASONIC
CORP. OF NORTH AMERICA,
24 PANASONIC CORP., SONY
ELECTRONICS, INC., SONY CORP.,
25 SAMSUNG ELECTRONICS
AMERICA, INC., AND SAMSUNG
26 ELECTRONICS CO., LTD

27 Defendants.
28

Case No. CV 08-8637 VBF (VBKx)

**CANON U.S.A., INC. AND CANON
INC.'S ANSWER TO PLAINTIFF'S
FIRST AMENDED COMPLAINT
AND CANON U.S.A.'S
COUNTERCLAIMS**

DEMAND FOR JURY TRIAL

Judge: Hon. Valerie Baker Fairbank

FILED
2009 JUN 23 PM 3:45
U.S. DISTRICT COURT
CENTRAL DIST. OF CALIF.
LOS ANGELES

1 Defendants Canon U.S.A., Inc. ("Canon U.S.A.") and Canon Inc. hereby
2 submit their Answer, including affirmative defenses, to Plaintiff's First Amended
3 Complaint filed by California Institute of Technology ("Caltech" or "Plaintiff"),
4 and Canon U.S.A.'s counterclaims thereto, as follows:

5 **JURISDICTION AND VENUE**

6 1. Canon U.S.A. and Canon Inc. admit that Caltech purports to bring this
7 action under the patent laws of the United States and that this Court has subject
8 matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a), and 35 U.S.C. § 271
9 *et. seq.* Canon U.S.A. and Canon Inc., however, deny the merits of the claims
10 asserted against them.

11 2. Canon U.S.A. and Canon Inc. admit that they are subject to personal
12 jurisdiction in this district. Canon U.S.A. and Canon Inc. lack knowledge or
13 information sufficient to form a belief regarding the truth of the allegations in
14 paragraph 2 with respect to Nikon, Inc., Nikon Corp., Olympus America, Inc.,
15 Olympus Corp., Panasonic Corp. of North America, Panasonic Corp., Sony
16 Electronics, Inc., Sony Corp., Samsung Electronics America, Inc. and Samsung
17 Electronics Co., Ltd. (collectively, "Other Defendants"), and therefore deny those
18 allegations. Canon U.S.A. and Canon Inc. deny the remaining allegations in
19 paragraph 2.

20 3. Canon U.S.A. admits that venue is proper in this district as to Canon
21 U.S.A. and Canon Inc. admits that venue is proper in this district as to Canon Inc.,
22 but both deny having committed any wrongful acts upon which venue is allegedly
23 based. Canon U.S.A. and Canon Inc. lack knowledge or information sufficient to
24 form a belief regarding the truth of the allegations in paragraph 3 with respect to
25 Other Defendants and therefore denies those allegations.

26 **THE PARTIES**

27 4. Canon U.S.A. and Canon Inc. lack knowledge or information
28 sufficient to form a belief regarding the truth of the allegations in paragraph 4 and

1 therefore deny those allegations.

2 5. Canon U.S.A. and Canon Inc. admit that Canon U.S.A., Inc. is a
3 corporation organized under the laws of New York, having its principal place of
4 business at One Canon Plaza, Lake Success, New York 11042-1113. Canon U.S.A.
5 and Canon Inc. further admit that Canon U.S.A. is authorized to do business in
6 California and may be served by serving its registered agent, CT Corporation
7 System, 818 West Seventh St., Los Angeles, CA 90017.

8 6. Canon U.S.A. and Canon Inc. admit that Canon Inc. is a corporation
9 organized under the laws of Japan, having its principal place of business at 30-2
10 Shimomaruko 3 Chome, OHTA-KU, Tokyo 146-8501, Japan. Canon U.S.A. and
11 Canon Inc. further admit that Canon Inc. is a nonresident that engages in business
12 in California, and that Canon Inc. does not maintain a regular place of business in
13 California or a designated agent for service of process in California. Canon U.S.A.
14 and Canon Inc. admit that Canon Inc. may be served with process in Japan pursuant
15 to the Hague Convention on the Service Abroad of Judicial and Extrajudicial
16 Documents.

17 7. Canon U.S.A. and Canon Inc. lack knowledge or information
18 sufficient to form a belief regarding the truth of the allegations in paragraph 7 and
19 therefore deny those allegations.

20 8. Canon U.S.A. and Canon Inc. lack knowledge or information
21 sufficient to form a belief regarding the truth of the allegations in paragraph 8 and
22 therefore deny those allegations.

23 9. Canon U.S.A. and Canon Inc. lack knowledge or information
24 sufficient to form a belief regarding the truth of the allegations in paragraph 9 and
25 therefore deny those allegations.

26 10. Canon U.S.A. and Canon Inc. lack knowledge or information
27 sufficient to form a belief regarding the truth of the allegations in paragraph 10 and
28 therefore deny those allegations.

1 11. Canon U.S.A. and Canon Inc. lack knowledge or information
2 sufficient to form a belief regarding the truth of the allegations in paragraph 11 and
3 therefore deny those allegations.

4 12. Canon U.S.A. and Canon Inc. lack knowledge or information
5 sufficient to form a belief regarding the truth of the allegations in paragraph 12 and
6 therefore deny those allegations.

7 13. Canon U.S.A. and Canon Inc. lack knowledge or information
8 sufficient to form a belief regarding the truth of the allegations in paragraph 13 and
9 therefore deny those allegations.

10 14. Canon U.S.A. and Canon Inc. lack knowledge or information
11 sufficient to form a belief regarding the truth of the allegations in paragraph 14 and
12 therefore deny those allegations.

13 15. Canon U.S.A. and Canon Inc. lack knowledge or information
14 sufficient to form a belief regarding the truth of the allegations in paragraph 15 and
15 therefore deny those allegations.

16 16. Canon U.S.A. and Canon Inc. lack knowledge or information
17 sufficient to form a belief regarding the truth of the allegations in paragraph 16 and
18 therefore deny those allegations.

19 **PATENTS-IN-SUIT**

20 17. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 5,990,506
21 (the “ ’506 patent”), entitled “Active Pixel Sensors with Substantially Planarized
22 Color Filtering Elements,” states on its face that it was issued on November 23,
23 1999. Canon U.S.A. and Canon Inc. further admit that a copy of the ’506 patent is
24 attached to Plaintiff’s First Amended Complaint as Exhibit A. Canon U.S.A. and
25 Canon Inc. lack knowledge or information sufficient to form a belief regarding the
26 truth of the remaining allegations in paragraph 17 and therefore deny those
27 allegations.

28 18. Canon U.S.A. and Canon Inc. deny that U.S. Patent No. 6,456,326 (the

1 “ ’326 patent”) is entitled “Single Chip Camera Having Double Sampling
2 Operation.” Canon U.S.A. and Canon Inc. admit that the ’326 patent states on its
3 face that it was issued on September 24, 2002. Canon U.S.A. and Canon Inc.
4 further admit that a copy of the ’326 patent is attached to Plaintiff’s First Amended
5 Complaint as Exhibit B. Canon U.S.A. and Canon Inc. lack knowledge or
6 information sufficient to form a belief regarding the truth of the remaining
7 allegations in paragraph 18 and therefore deny those allegations.

8 19. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 6,549,235
9 (the “ ’235 patent”), entitled “Single Substrate Camera Device with CMOS Image
10 Sensor,” states on its face that it was issued on April 15, 2003. Canon U.S.A. and
11 Canon Inc. further admit that a copy of the ’235 patent is attached to Plaintiff’s
12 First Amended Complaint as Exhibit C. Canon U.S.A. and Canon Inc. lack
13 knowledge or information sufficient to form a belief regarding the truth of the
14 remaining allegations in paragraph 19 and therefore deny those allegations.

15 20. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 6,555,842
16 (the “ ’842 patent”), entitled “Active Pixel Sensor with Intra-pixel Charge
17 Transfer,” states on its face that it was issued on April 29, 2004. Canon U.S.A. and
18 Canon Inc. further admit that a copy of the ’842 patent is attached to Plaintiff’s
19 First Amended Complaint as Exhibit D. Canon U.S.A. and Canon Inc. lack
20 knowledge or information sufficient to form a belief regarding the truth of the
21 remaining allegations in paragraph 20 and therefore deny those allegations.

22 21. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 6,570,617
23 (the “ ’617 patent”), entitled “CMOS Active Pixel Sensor Type Imaging System on
24 a Chip,” states on its face that it was issued on May 27, 2003. Canon U.S.A. and
25 Canon Inc. further admit that a copy of the ’617 patent is attached to Plaintiff’s
26 First Amended Complaint as Exhibit E. Canon U.S.A. and Canon Inc. lack
27 knowledge or information sufficient to form a belief regarding the truth of the
28 remaining allegations in paragraph 21 and therefore deny those allegations.

1 22. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 6,744,068
2 (the “ ’068 patent”), entitled “Active Pixel Sensor with Intra-pixel Charge
3 Transfer,” states on its face that it was issued on June 1, 2004. Canon U.S.A. and
4 Canon Inc. further admit that a copy of the ’068 patent is attached to Plaintiff’s
5 First Amended Complaint as Exhibit F. Canon U.S.A. and Canon Inc. lack
6 knowledge or information sufficient to form a belief regarding the truth of the
7 remaining allegations in paragraph 22 and therefore deny those allegations.

8 23. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 5,949,483
9 (the “ ’483 patent”), entitled “Active Pixel Sensor Array with Multiresolution
10 Readout,” states on its face that it was issued on September 7, 1999. Canon U.S.A.
11 and Canon Inc. further admit that a copy of the ’483 patent is attached to Plaintiff’s
12 First Amended Complaint as Exhibit G. Canon U.S.A. and Canon Inc. lack
13 knowledge or information sufficient to form a belief regarding the truth of the
14 remaining allegations in paragraph 23 and therefore deny those allegations.

15 24. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 6,606,122
16 (the “ ’122 patent”), entitled “Single Chip Camera Active Pixel Sensor,” states on
17 its face that it was issued on August 12, 2003. Canon U.S.A. and Canon Inc.
18 further admit that a copy of the ’122 patent is attached to Plaintiff’s First Amended
19 Complaint as Exhibit H. Canon U.S.A. and Canon Inc. lack knowledge or
20 information sufficient to form a belief regarding the truth of the remaining
21 allegations in paragraph 24 and therefore deny those allegations.

22 25. Canon U.S.A. and Canon Inc. deny that U.S. Patent No. 6,943,838 (the
23 “ ’838 patent”) is entitled “Active Pixel Sensor Pixel Having a Photodetector
24 Whose Output Is Coupled to and Output Transistor Gate.” Canon U.S.A. and
25 Canon Inc. admit that the ’838 patent states on its face that it was issued on
26 September 13, 2005. Canon U.S.A. and Canon Inc. further admit that a copy of the
27 ’838 patent is attached to Plaintiff’s First Amended Complaint as Exhibit I. Canon
28 U.S.A. and Canon Inc. lack knowledge or information sufficient to form a belief

1 regarding the truth of the remaining allegations in paragraph 25 and therefore deny
2 those allegations.

3 26. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 6,825,059
4 (the “ ’059 patent”), entitled “Active Pixel Sensor Array with Electronic
5 Shuttering,” states on its face that it was issued on November 30, 2004. Canon
6 U.S.A. and Canon Inc. further admit that a copy of the ’059 patent is attached to
7 Plaintiff’s First Amended Complaint as Exhibit J. Canon U.S.A. and Canon Inc.
8 lack knowledge or information sufficient to form a belief regarding the truth of the
9 remaining allegations in paragraph 26 and therefore deny those allegations.

10 27. Canon U.S.A. and Canon Inc. admit that U.S. Patent No. 7,369,166
11 (the “ ’166 patent”), entitled “Single Substrate Camera Device with CMOS Image
12 Sensor” states on its face that it was issued on May 6, 2008. Canon U.S.A. and
13 Canon Inc. further admit that a copy of the ’166 patent is attached to Plaintiff’s
14 First Amended Complaint as Exhibit K. Canon U.S.A. and Canon Inc. lack
15 knowledge or information sufficient to form a belief regarding the truth of the
16 remaining allegations in paragraph 27 and therefore deny those allegations.

17 28. Canon U.S.A. and Canon Inc. admit that Plaintiff’s First Amended
18 Complaint collectively refers to the ’506 patent, the ’326 patent, the ’235 patent, the
19 ’842 patent, the ’617 patent, the ’068 patent, the ’483 patent, the ’122 patent, the
20 ’838 patent, the ’059 patent and the ’166 patent as “the Caltech Patents.”

21 29. Canon U.S.A. and Canon Inc. lack knowledge or information
22 sufficient to form a belief regarding the truth of the allegations in paragraph 29 and
23 therefore deny those allegations.

24 **PATENT INFRINGEMENT**

25 30. Canon U.S.A. and Canon Inc. restate and incorporate the replies set
26 forth in paragraph 1 through 29 of this Answer.

27 31. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 31.

28 32. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 32.

1 33. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 33.

2 34. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 34.

3 35. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 35.

4 36. Canon U.S.A. and Canon Inc. lack knowledge or information
5 sufficient to form a belief regarding the truth of the allegations in paragraph 36 and
6 therefore deny those allegations.

7 37. Canon U.S.A. and Canon Inc. lack knowledge or information
8 sufficient to form a belief regarding the truth of the allegations in paragraph 37 and
9 therefore deny those allegations.

10 38. Canon U.S.A. and Canon Inc. lack knowledge or information
11 sufficient to form a belief regarding the truth of the allegations in paragraph 38 and
12 therefore deny those allegations.

13 39. Canon U.S.A. and Canon Inc. lack knowledge or information
14 sufficient to form a belief regarding the truth of the allegations in paragraph 39 and
15 therefore deny those allegations.

16 40. Canon U.S.A. and Canon Inc. lack knowledge or information
17 sufficient to form a belief regarding the truth of the allegations in paragraph 40 and
18 therefore deny those allegations.

19 41. Canon U.S.A. and Canon Inc. lack knowledge or information
20 sufficient to form a belief regarding the truth of the allegations in paragraph 41 and
21 therefore deny those allegations.

22 42. Canon U.S.A. and Canon Inc. lack knowledge or information
23 sufficient to form a belief regarding the truth of the allegations in paragraph 42 and
24 therefore deny those allegations.

25 43. Canon U.S.A. and Canon Inc. lack knowledge or information
26 sufficient to form a belief regarding the truth of the allegations in paragraph 43 and
27 therefore deny those allegations.

28 44. Canon U.S.A. and Canon Inc. lack knowledge or information

1 sufficient to form a belief regarding the truth of the allegations in paragraph 44 and
2 therefore deny those allegations.

3 45. Canon U.S.A. and Canon Inc. lack knowledge or information
4 sufficient to form a belief regarding the truth of the allegations in paragraph 45 and
5 therefore deny those allegations.

6 46. Canon U.S.A. and Canon Inc. lack knowledge or information
7 sufficient to form a belief regarding the truth of the allegations in paragraph 46 and
8 therefore deny those allegations.

9 47. Canon U.S.A. and Canon Inc. lack knowledge or information
10 sufficient to form a belief regarding the truth of the allegations in paragraph 47 and
11 therefore deny those allegations.

12 48. Canon U.S.A. and Canon Inc. lack knowledge or information
13 sufficient to form a belief regarding the truth of the allegations in paragraph 48 and
14 therefore deny those allegations.

15 49. Canon U.S.A. and Canon Inc. lack knowledge or information
16 sufficient to form a belief regarding the truth of the allegations in paragraph 49 and
17 therefore deny those allegations.

18 50. Canon U.S.A. and Canon Inc. lack knowledge or information
19 sufficient to form a belief regarding the truth of the allegations in paragraph 50 and
20 therefore deny those allegations.

21 51. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 51
22 with respect to Canon U.S.A. and Canon Inc. Canon U.S.A. and Canon Inc. lack
23 knowledge or information sufficient to form a belief regarding the truth of the
24 remaining allegations in paragraph 51 and therefore deny those allegations.

25 52. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 52
26 with respect to Canon U.S.A. and Canon Inc. Canon U.S.A. and Canon Inc. lack
27 knowledge or information sufficient to form a belief regarding the truth of the
28 remaining allegations in paragraph 52 and therefore deny those allegations.

53. Canon U.S.A. and Canon Inc. deny the allegations in paragraph 53 with respect to Canon U.S.A. and Canon Inc. Canon U.S.A. and Canon Inc. lack knowledge or information sufficient to form a belief regarding the truth of the remaining allegations in paragraph 53 and therefore deny those allegations.

CANON U.S.A.'S AND CANON INC.'S FIRST AFFIRMATIVE DEFENSE

(Noninfringement)

54. Canon U.S.A. and Canon Inc. are not infringing and have not infringed, either directly, contributorily or by inducement, any claim of the '506 patent, the '326 patent, the '235 patent, the '842 patent, the '617 patent, the '068 patent, the '483 patent, the '122 patent, the '838 patent, the '059 patent or the '166 patent (collectively the "Patents-In-Suit"), either literally or under the doctrine of equivalents.

CANON U.S.A.'S AND CANON INC.'S SECOND AFFIRMATIVE

DEFENSE

(Invalidity)

55. On information and belief, all of the claims of the Patents-In-Suit are invalid for failure to comply with one or more of the requirements of 35 U.S.C. §§ 101, 102, 103 and 112.

CANON U.S.A.'S AND CANON INC.'S THIRD AFFIRMATIVE DEFENSE

(Laches and Waiver)

56. On information and belief, Caltech is barred in whole or in part from asserting the Patents-In-Suit against Canon U.S.A. and Canon Inc. by the equitable doctrines of laches, acquiescence or waiver, or any combination thereof.

CANON U.S.A.'S AND CANON INC.'S FOURTH AFFIRMATIVE

DEFENSE

(Unenforceability/Inequitable Conduct)

57. All of the Patents-In-Suit are void and unenforceable because the named inventor(s), the prosecuting attorney(s), and/or other individual(s) having a

1 duty of candor and good faith dealing with the United States Patent and Trademark
2 Office (the "USPTO") (collectively "Applicants") breached their duty in the
3 prosecution of the applications that led to the issuance of the Patents-In-Suit by
4 failing to properly disclose to the USPTO material information and by making false
5 and misleading statements, with intent to deceive the USPTO, either: (1) directly in
6 prosecuting the Patents-In-Suit; or (2) indirectly in prosecuting patents related to
7 the Patents-In-Suit (the "Parent Patents"), through the doctrine of infectious
8 unenforceability.

9 58. The prosecuting attorney(s) and/or other individual(s) associated with
10 the filing and/or prosecution of the Parent Patents and the Patents-In-Suit include,
11 at least, the named inventors of the Patents-In-Suit, patent attorneys Robert M.
12 Wallace and Scott C. Harris, and, based on information and belief, at least one or
13 more employees of Caltech who were responsible for overseeing the filing and/or
14 prosecution of the Parent Patents and the Patents-In-Suit.

15 59. Under 37 C.F.R. § 1.56, each individual associated with the filing
16 and/or prosecution of a patent application has, during the pendency of that
17 application, a duty of candor and good faith in dealing with the USPTO, which
18 includes a duty to disclose to the USPTO all information known to those
19 individuals to be material to the patentability of the pending claims.

20 60. All the named inventors of the Parent Patents and the Patents-In-Suit
21 expressly acknowledged their duty of disclosure as defined by 37 C.F.R. § 1.56 to
22 disclose all information known to them which would be material to the patentability
23 in declarations filed with the USPTO.

24 61. Under 37 C.F.R. § 10.18(b), which was in effect during the pendency
25 of each of the Patents-In-Suit and the Parent Patents, patent attorneys and patent
26 agents involved in the filing and/or prosecution of a patent application were under a
27 duty to make a reasonable inquiry as to truth and propriety before submitting a
28 paper to the USPTO.

62. Actions and omissions by Applicants in the prosecution of U.S. Patent No. 5,471,515 ("the '515 patent"), U.S. Patent No. 6,101,232 ("the '232 patent"), and U.S. Patent No. 5,841,126 ("the '126 patent"); U.S. Patent No. 6,166,768 ("the '768 patent") and U.S. Patent No. 6,486,503 ("the '503 patent") render the Patents-In-Suit unenforceable under the doctrine of infectious unenforceability.

I. AFFIRMATIVE MISREPRESENTATIONS TO THE USPTO.

A. Kemeny Declaration (The '515 and '232 Patents).

63. On September 29, 1994, Sabrina Kemeny, a named co-inventor of the '515 patent, executed a declaration in support of the '515 patent application and in response to the USPTO's rejection of the pending application claim. [Exhibit A hereto (the "Kemeny Decl.")]

64. After describing her academic achievements and experience in the field of the art, Kemeny averred in her declaration that "[a]ll CCD imagers have been limited by the necessity of sharing a common read-out circuit among plural pixels." [Exhibit A hereto, at 1]. Kemeny also averred:

the present invention ... provides the first CCD imaging circuit having one read-out circuit for each pixel or photogate. Nothing in the art would suggest one read-out circuit per photogate.... This combination of features makes possible for the first time the one-pixel-per-readout circuit structure of the invention and was first disclosed in the applicant's specification.

[Exhibit A hereto, at 2].

65. Articles authored by Kemeny and/or other '515 patent named co-inventors Eric R. Fossum and Sunetra K. Mendis show that prior to the Kemeny Decl., Kemeny and the other named co-inventors of the '515 patent were aware of prior art publications teaching one read-out circuit for each pixel. Examples of these articles include, but are not limited to:

A. Mendis, Sunetra K., Kemeny, Sabrina E., Gee, Russell C., Pain Bedabrata, Kim Quiesup, and Fossum, Eric. R., *Progress in CMOS Active Pixel Image Sensors*, SPIE (1994) (the "1994

1 Mendis Article”) [Exhibit B hereto];

2 B. Fossum, Eric R., *Active Pixel Sensors: Are CCDs Dinosaurs?*,
3 Proc. SPIE, col. 1900, pp. 2-14, 1993 (the “Fossum Dinosaurs
4 Article”) [Exhibit C hereto];

5 C. Kemeny, Sabrina E., Eid, El-Sayed, Mendis, Sunetra, and
6 Fossum, Eric R., *Update on focal-plane image processing*
7 *research*, SPIE Vol. 1447 Charge-Coupled Devices and Solid
8 State Optical Sensors II (1991) (the “Kemeny Focal-Plane
9 Article”) [Exhibit D hereto];

10 D. Fossum, Eric R., *Architectures for Focal-plane Image*
11 *Processing*, Opt. Eng., vol. 28(8), 865-871 (1989) (the “1989
12 Fossum Architecture Article) [Exhibit E hereto].

13 66. The 1994 Mendis Article, which also lists Kemeny and Fossum as
14 authors, defines an active pixel sensor as “an image sensor technology that has one
15 or more active transistors within the pixel unit cell”. The 1994 Mendis Article
16 further cites to at least five references in its “Introduction” that disclose such a
17 structure and that qualify as prior art to the ’515 patent application and the Patents-
18 In-Suit.

19 67. The Fossum Dinosaurs Article, authored by Fossum, similarly
20 identifies numerous prior art references in its “State-Of-The-Art” section disclosing
21 active pixel sensors having one readout circuit per pixel.

22 68. The Kemeny Focal-Plane Article, which also lists Mendis and Fossum
23 as authors, describes research into incorporating image processing into CCD image
24 sensors, referred to as “Focal-plane image processing.” The Kemeny Focal-Plane
25 Article provides experimental results obtained with imaging devices made by the
26 group and cites to the 1989 Fossum Architecture Article.

27 69. The 1989 Fossum Architecture Article describes the use of a
28 CCD/CMOS process, the combination of a photoreceptor and processing element in

1 a combined pixel unit cell and that the processing element can include
2 buffer/amplifier functions for the pixel unit cell or more sophisticated functions.

3 70. On information and belief, in view of the foregoing publications by the
4 named inventor of the '515 patent, Kemeny knew of the foregoing teachings in the
5 prior art. The Kemeny Decl., therefore, knowingly contained material false and
6 misleading statements submitted with an intent to deceive the USPTO.

7 71. Through an October 11, 1994 Amendment, Applicants submitted and
8 relied on the Kemeny Decl. to argue for the patentability of the then pending '515
9 patent application claims.

10 72. On information and belief, the Applicants committed inequitable
11 conduct by submitting and relying on the false and misleading Kemeny Decl. in the
12 October 11, 1994 Amendment, with an intent to deceive the USPTO in order to
13 obtain the issuance of the '515 patent. The false statements were material to the
14 examination of the application that issued as the '515 patent.

15 73. Through a November 16, 1995 Amendment, Applicants relied on the
16 Kemeny Decl. to argue for the patentability of the then pending '232 patent
17 application claims.

18 74. On information and belief, the Applicants committed inequitable
19 conduct by submitting and relying on the false and misleading Kemeny Decl., in
20 the November 16, 1995 Amendment, with an intent to deceive the USPTO in order
21 to obtain the issuance of the '232 patent. The false statements were material to the
22 examination of the application that issued as the '232 patent.

23 **B. Misleading Claim to Priority (the '126 and '483 Patents).**

24 75. The '126 patent is a continuation-in-part of the '232 patent and claims
25 priority to the '232 patent and a provisional patent application, 60/010,678 filed on
26 January 26, 1996.

27 76. In an October 28, 1997 Office Action, the claims of the '126 patent
28 application were rejected pursuant to 35 U.S.C. 102(e) over U.S. Patent No.

1 5,461,425, which was filed on October 24, 1994.

2 77. In response, in an amendment dated January 28, 1998, the Applicants
3 argued that claim 1 of the '126 patent was entitled to the benefit of the filing date of
4 '515 patent. Specifically, it was stated that:

5 Claim 1 is entitled to the priority date of the parent
6 (January 28, 1994) because the parent includes a substrate
7 having an array of pixels and a control area. The pixels
8 are disclosed to be light collecting elements which each
9 receive light and store electronic information in an
10 amount indicative of an amount of light received during
11 an integration period (see, e.g., column 3, lines 22-24 of
the above '515 patent). The control area includes a
readout circuit (element 70 of the '515 patent). The
circuitry in the control area is CMOS (column 4, lines 59-
61), and the pixel area is compatible with CMOS (column
4, lines 40-42). The timing element is that which controls,
e.g., the integration period.

12 [January 28, 1998 Amendment at 2-3].

13 78. Contrary to the Applicants assertions, the '515 patent does not disclose
14 (1) a timing element; (2) a control area outside of the pixel area, or (3) that the
15 readout circuitry is a "control area".

16 79. With regard to the '483 patent, in response to a rejection by the
17 USPTO, in an Amendment on October 7, 1998 the Applicants intentionally made
18 false statements and misleadingly argued that Mandl (prior art cited in an
19 obviousness rejection of the then pending claims 1-4, 6-7, 12-13, 16-17, and 21)
20 "did not constitute prior art ... [because it] was filed later than the priority date of
21 the claim limitation on the active pixel sensor cited in Claims 1-4, 6-7, 12-13, 16-
22 17, and 21, which is January 28, 1994, based on the parent application No.
23 08/188,032, now U.S. Patent No. 5,471,515." ('483 Patent File History, October 7,
24 1998 Amendment (emphasis in original)).

25 80. However, then pending claims 1-4, 6-7, 12-13, 16-17, and 21 lacked
26 support in the '515 patent and, as a result, were not entitled to the filing date of the
27 '515 patent as a priority date. Therefore, contrary to the argument in the
28 Amendment, Mandl could not be predated and instead stood as material prior art to

1 the claims of the '483 patent application.

2 81. On information and belief, the Applicants committed inequitable
3 conduct by making these statements with intent to deceive the USPTO as to the
4 correct priority date for the claims of the '126 patent and '483 patent and, thereby
5 avoid invalidating prior art.

6 **C. Misleading Arguments for Patentability (the '506 Patent).**

7 82. The '506 patent claims priority to provisional patent application no.
8 60/013,700, which was filed on March 20, 1996.

9 83. On February 19, 1999, in response to a USPTO rejection, Applicants
10 admitted that the prior art references applied by the USPTO individually taught the
11 features recited in certain claims of the '506 patent application, an active pixel
12 sensor array and a color filter, but argued that there was not motivation to combine
13 these features.

14 84. The Fossum Dinosaurs article, however, expressly discusses a prior art
15 reference that discloses an active pixel sensor with a color filter array.

16 85. On information and belief, in view of the foregoing, Applicants
17 committed inequitable conduct in attempting to obtain allowance of the '506 patent
18 by stating to the USPTO with intent to deceive that there was no motivation to
19 combine active pixel sensors with color filter arrays.

20 **II. FAILURE TO CITE MATERIAL INFORMATION TO THE**
21 **USPTO.**

22 **A. Prior Art Materials.**

23 86. Applicants authored numerous publications that are either material
24 prior art or that cite to prior art publications material to Applicants' inventions.
25 Applicants failed to cite these highly material, non-cumulative prior art references
26 in the applications of both the Patents-In-Suit, as well as in the applications of the
27 Parent Patents.

28 87. Publications authored by the named inventors in the 1980s and 1990s

1 describe the alleged inventions disclosed and claimed by the Patents-In-Suit. These
2 same publications also identify a number of publications authored by third-parties
3 that are material to inventions claimed in the Patents-In-Suit. Examples of
4 publications authored by the Inventors that are material prior art to the Patent-In-
5 Suit or cite to material prior art, include, but are not limited to:

- 6 A. The 1994 Mendis Article;
- 7 B. The Fossum Dinosaurs Article;
- 8 C. The Kemeny Focal-Plane Article;
- 9 D. The 1989 Fossum Architecture Article;
- 10 E. Fossum, Eric R., *On-Chip Focal-Plane Image Processing*, Proc.
11 of 1991 Symposium on Advanced Image-Acquisition
12 Technology (SAIT91), pp. 48-56, T. Ando, ed., Tokyo, Japan,
13 (November 1991) (the "1991 Fossum Focal-Plane Image
14 Processing Article") [Exhibit F hereto];
- 15 F. Fossum, Eric R., *Future Directions In Focal-Plane Signal*
16 *Processing For Space-Borne Scientific Imagers*, Proc. SPIE vol.
17 1541, pp. 62-67 (1991) (the "1991 Fossum Future Directions
18 Article") [Exhibit G hereto];
- 19 G. Eid, E-S, et al., *CMOS Active Pixel Image Sensors for Low Cost*
20 *Application*, ICECS '94, December 1994, Cairo, Egypt (the
21 "1994 Eid Article"), co-authored by named inventor Fossum
22 [Exhibit H hereto];
- 23 H. Fossum, Eric R., *Ultra Low Power Imaging Systems Using*
24 *CMOS Image Sensor Technology*, SPIE Vol. 2267, pp. 107 -
25 111 (1994) (the "Fossum Ultra Low Power Article") [Exhibit I
26 hereto];
- 27 I. Fossum, Eric R., *Assessment of Image Sensor Technology for*
28 *Future NASA Missions*, SPIE vol. 2172, pp. 1 - 16 (1994) (the

- 1 “Fossum Future NASA Missions Article”) [Exhibit J hereto];
- 2 J. S. Mendis, B. Pain, R. Nixon, and E.R. Fossum, *Design Of A*
- 3 *Low-Light-Level Image Sensor With On-Chip Sigma-Delta*
- 4 *Analog-To-Digital Conversion*, CCD's and Optical Sensors III,
- 5 Proc. SPIE vol. 1900, pp. 31-39 (1993) (the “Mendis 1993 A-to-
- 6 D Article”) [Exhibit K hereto];
- 7 K. Fossum, Eric R., *CMOS Image Sensors: Electronic Camera on*
- 8 *a Chip*, IEEE 1.3.1 – 1.3.9 (1995) (the “Fossum Camera on a
- 9 Chip Article”) [Exhibit L hereto];
- 10 L. Kemeny, B. Pain, E. Fossum, L. Matthies, and R. Panicacci,
- 11 *Multiresolution Image Sensor Using Switched Capacitor*
- 12 *Circuits*, Proc. 1994 International CMOS Camera Workshop,
- 13 Holmdel NJ, October 17-18, 1994 [Exhibit M hereto];
- 14 M. Gee, Russell C., et al., *Development of CMOS Active Pixel*
- 15 *Image Sensors for Low Cost Commercial Applications*, Proc. of
- 16 NASA Technology 2004, Washington DC, November 1994
- 17 (Nov. 1994) (the “1994 Gee Article”) co-authored by inventors
- 18 Fossum, Mendis, Kemeny and Nixon [Exhibit N hereto];
- 19 N. Fossum, Eric R., et al., *Development of CM(X [sic] Active Pixel*
- 20 *Image Sensors for Low Cost Commercial Applications* (June
- 21 1994) (the “1994 Fossum Development Article”) [Exhibit O
- 22 hereto];
- 23 O. Mendis, Sunetra K., *CMOS Active Pixel Image Sensors with On-*
- 24 *Chip Analog-to-Digital Conversion*, Thesis (Ph. D.) – Columbia
- 25 University (1995) (the “1995 Mendis Thesis”) [Exhibit P
- 26 hereto]; and
- 27 P. Mendis, Sunetra K., Kemeny, Sabrina, E., Fossum, Eric R., *A*
- 28 *128 x 128 CMOS Active Pixel Image Sensor for Highly*

1 *Integrated Imaging Systems*, IEDM 93, pp. 583-86 (1993) (the
2 “1993 Mendis Article”) [Exhibit Q hereto].

3 88. Applicants were aware of a number of material prior art references
4 prior to and during the pendency of prosecution of the Patents-In-Suit and the
5 Parent Patents as evidenced by their citation to those references in articles authored
6 by the inventors, such as the articles listed above. Examples of material prior art
7 references include, but are not limited to:

- 8 A. Yadid-Pecht, O., et al., *A Random Access Photodiode Array for*
9 *Intelligent Image Capture*, IEEE Trans. on Electron Devices,
10 vol. 38, no. 8, pp. 1772-1780 (Aug. 1991) (the “1991 Yadid-
11 Pecht Article”) [Exhibit R hereto], cited in, for example, the
12 1994 Mendis Article and the Fossum Dinosaurs Article;
13 B. Hynecek, J., *BCMD – An Improved Photosite Structure for High*
14 *Density Sensors*, IEEE Transactions on Electron Devices, vol.,
15 38(5), pp. 1011-1020 (May 1991) (the “1991 Hynecek Article”) [Exhibit S hereto],
16 cited in, for example, the 1994 Mendis
17 Article and the Fossum Dinosaurs Article;
18 C. Kyomasu, M., *A New MOS Imager Using Photodiode as*
19 *Current Source*, IEEE Journal of Solid-State Circuits, vol. 26,
20 no. 8, pp. 1116-1122 (1991) (the “1991 Kyomasu Article”) [Exhibit T hereto],
21 cited in, for example, the Fossum Camera on
22 a Chip Article;
23 D. Andoh, F., et al., *A 250,000-Pixel Image Sensor with FET*
24 *Amplification at Each Pixel for High-Speed Television Cameras*,
25 1990 IEEE International Solid-State Circuits Conference (1990)
26 (the “1990 Andoh Article”) [Exhibit U hereto], cited in, for
27 example, the Fossum Camera on a Chip Article;
28 E. Chen, K., et al., *PASIC: A Processor – A/D converter-Sensor*

1 *Integrated Circuit*, IEEE, pp. 1705-1708 (1990) (“the 1990
2 Chen Article”) [Exhibit V hereto], cited in, for example, the
3 Fossum Camera on a Chip Article;

4 F. D. Renshaw, et al. *ASIC Vision*, 1990 IEEE CICC Proc., pp
5 7.3.1-7.3.4 (1990) (“ASIC Vision”) [Exhibit W hereto], cited in,
6 for example, the 1994 Eid Article; and

7 G. Forchheimer, R., et al., *MAPP2200 – A Second generation*
8 *smart optical sensor*, Proc. SPIE, vol. 1659, pp. 2-11 (1992) (the
9 “1992 Forchheimer Article”) [Exhibit X hereto], cited in, for
10 example, the Fossum Camera on a Chip Article.

11 89. On information and belief, the Patents-In-Suit and the Parent Patents
12 were procured by inequitable conduct, rendering them unenforceable in their
13 entirety. In the applications leading to the Patents-In-Suit and the Parent Patents,
14 Applicants failed to disclose to the USPTO material references relevant to the
15 prosecution with intent to deceive. Based on the fact that these references are
16 Applicants’ own publications describing the technology at issue in the Patents-In-
17 Suit and the Parent Patents or third-party prior art references cited in such
18 publications as being relevant to Applicants’ technology, Applicants were aware of
19 these prior art references and intentionally failed to provide these references with
20 the intent to deceive the USPTO. The references identified as omitted by
21 Applicants herein are illustrative. Canon U.S.A. and Canon Inc. reserve the right to
22 amend their answer to state additional misrepresentations and/or omissions as it
23 learns of them through the course of discovery in this action.

24 90. With respect to the ’515 patent and the ’232 patent Applicants
25 committed inequitable conduct through their failure to cite at least the following
26 exemplary references material to the patentability of these patents: (i) the Kemeny
27 Focal-Plane Article; (ii) the 1991 Fossum Focal-Plane Image Processing Article;
28 (iii) the 1991 Fossum Future Directions Article; (iv) the 1989 Fossum Architecture

1 Article; (v) the 1991 Yadid-Pecht Article; (vi) the 1991 Hyncek Article; (vii) the
2 1991 Kyomasu Article; (viii) the 1990 Andoh Article; (ix) the 1990 Chen Article;
3 (x) the ASIC Vision Article; (xi) the 1992 Forcheimer Article; and (xii) the Fossum
4 Dinosaurs Article.

5 91. With respect to the '126 patent, the '503 patent, the '059 patent and the
6 '838 patent Applicants committed inequitable conduct through their failure to cite
7 at least each of the exemplary prior art references disclosed in Paragraphs 87 and 88
8 above which are material to the patentability of these patents.

9 92. With respect to the '122 patent application Applicants committed
10 inequitable conduct through their failure to cite at least each of the exemplary prior
11 art references disclosed in Paragraphs 87 and 88 above (with the exception of the
12 Fossum Camera on a Chip Article, which was cited), which are material to the
13 patentability of this patent.

14 93. With respect to the applications for the '506 patent and the '483 patent,
15 Applicants committed inequitable conduct through their failure to cite at least each
16 of the exemplary prior art references disclosed in Paragraphs 87 and 88 above (with
17 the exception of the 1994 Mendis Article, which was cited), which are material to
18 the patentability of these patents.

19 94. With respect to the applications leading to the '842 patent, the '068
20 patent, the '166 patent, the '617 patent, the '326 patent, and the '235 patent,
21 Applicants committed inequitable conduct through their failure to cite at least the
22 following exemplary references material to the patentability of these patents: (i) the
23 Kemeny Focal-Plane Article; (ii) the 1991 Fossum Focal-Plane Image Processing
24 Article; (iii) the 1991 Fossum Future Directions Article; (iv) the 1994 Eid Article;
25 and (v) the Fossum Ultra Low Power Article.

26 95. With respect to the '842 patent, the '068 patent, the '166 patent, the
27 '617 patent, the '326 patent, and the '235 patent, Applicants committed inequitable
28 conduct by burying certain references. For example, even though the 1991 Yadid-

1 Pecht Article, the 1991 Kyomasu Article, the 1990 Chen Article, and the 1990
2 Andoh Article were material, the Applicants of the '842 patent and the '068 patent
3 failed to properly disclose these references to the USPTO. On information and
4 belief, the Applicants buried the references among more than 100 other references
5 with an intent to deceive and/or mislead the USPTO in order to obtain issuance of
6 the '842 patent and the '068 patent. Also, even though the 1991 Yadid-Pecht
7 Article, the 1991 Kyomasu Article, the 1990 Chen Article, the 1990 Andoh Article,
8 the 1993 Mendis Article, and the 1994 Mendis Article were material, based on
9 information and belief, the Applicants of the '166 patent, the '617 patent, the '326
10 patent, and the '235 patent intentionally failed to properly disclose these references
11 to the USPTO and instead buried these references among many other references
12 which were not as material or relevant. On information and belief, this was done
13 with intent to deceive the USPTO in order to obtain issuance of the '166 patent, the
14 '617 patent, the '326 patent, and the '235 patent

15 96. In addition to the prior art references related to the Applicants'
16 publications discussed above, the '842 patent is also unenforceable due to
17 inequitable conduct arising from Applicants' failure to properly cite prior art
18 references that were cited by the USPTO during prosecution of the '232 patent (the
19 immediate parent of the '842 patent).

20 97. The Examiner of the '232 patent application rejected claims in an
21 Office Action dated July 2, 1997, specifically using the following references: (i)
22 U.S. Patent No. 4,407,010 to Baji et al.; (ii) U.S. Patent No. 5,563,429 to Isogai;
23 (iii) U.S. Patent No. 4,093,782 to Hartman et al.; (iv) U.S. Patent No. 4,155,094 to
24 Ohba et al.; (v) U.S. Patent No. 3,623,132 to Green; (vi) U.S. Patent No. 4,287,441
25 to Smith; (vii) U.S. Patent No. 4,683,580 to Matsunaga; (viii) U.S. Patent No.
26 5,323,052 to Koyama; and (ix) JP Pub. No. 5235317 (collectively, "the '232 patent
27 references").

28 98. On June 27, 2000, the '842 patent application was filed with

1 substantially identical claims as were previously rejected in the '232 patent
2 application. A list of references was filed concurrently with the '842 patent
3 application, listing the '232 patent references. Thereafter, however, in an Office
4 Action the Examiner notified the Applicants that "[t]he list of references in the
5 specification filed on June 27/2000 [sic] is not a proper information disclosure
6 statement.... Therefore, unless the references have been cited by the examiner on
7 form PTO-892, they are not been [sic] considered." The '232 patent references
8 were never resubmitted in a proper manner, and the Examiner never considered
9 them, as indicated by the fact that the Examiner struck-through the '232 patent
10 references on the list provided with the '842 patent application.

11 99. On information and belief, the Applicants therefore intentionally
12 withheld material references from the Examiner during the '842 patent prosecution.
13 Despite having received express notice of their failure to properly submit the '232
14 patent references the Applicants still intentionally failed to remedy this material
15 omission.

16 **B. Omnivision Litigation.**

17 100. The '068 patent, the '842 patent, the '235 patent, the '617 patent, the
18 '166 patent, the '326 patent, the '059 patent, the '838 patent, and the '122 patent are
19 unenforceable due to inequitable conduct based on the failure of the Applicants to
20 cite to the USPTO the existence of litigations involving the '126 patent and
21 material information arising therefrom.

22 101. The Manual of Patent Examining Procedure ("MPEP"), in Section
23 2001.06(c), states that: "Where the subject matter for which a patent is sought is or
24 has been involved in litigation, the existence of such litigation and any other
25 material information arising therefrom must be brought to the attention of the
26 Patent and Trademark Office."

27 102. Section 2001.06(c) of the MPEP was in effect during the litigations
28 involving the '126 patent and during the prosecution of the '068 patent, the '842

1 patent, the '235 patent, the '617 patent, the '166 patent, the '326 patent, the '059
2 patent, the '838 patent, and the '122 patent.

3 103. On October 13, 2000, Omnivision Technologies Inc. ("Omnivision")
4 filed suit in the United States District Court for the Northern District of California
5 against Photobit Corporation and Caltech seeking a declaratory judgment of non-
6 infringement and invalidity of the '126 patent and other patents (the "Omnivision
7 District Court Litigation"). The Omnivision District Court Litigation advanced
8 through *Markman* briefing in which Caltech and the other parties briefed their
9 respective positions on disputed claim terms in the '126 patent and other patents.
10 For the '126 patent, Caltech briefed its position on the following claim terms that
11 are, in whole or in part, claim terms in the '068 patent, the '842 patent, the '235
12 patent, the '617 patent, the '166 patent, the '326 patent, the '059 patent, the '838
13 patent, and the '122 patent: (i) "A camera on a chip;" (ii) "pixel;" (iii) "light
14 collecting elements which each receive light and store an electronic information in
15 an amount indicative of an amount of light received during an integration period;"
16 (iv) "timing element;" (v) "readout control element;" (vi) "compatible with
17 CMOS;" (vii) "An imaging system on a single substrate;" and (viii) "a latch
18 element storing values to be used in said timing element." On September 24, 2001,
19 the court dismissed the case with prejudice. A true and correct copy of the Joint
20 Claim Construction and Prehearing Statement from the Omnivision District Court
21 Litigation, filed on July 10, 2001, is attached hereto as Exhibit Y. A true and
22 correct copy of Photobit Corporation and California Institute of Technology's
23 Opening Markman Claim Construction Brief from the Omnivision District Court
24 Litigation, filed on August 23, 2001, is attached hereto as Exhibit Z.

25 104. On or about February 2001, Photobit Corporation and Caltech filed a
26 Section 337 action before the U.S. International Trade Commission ("ITC")
27 seeking an exclusionary order pertaining to products alleged to infringe the '126
28 patent, the '506 patent and a third patent (the "Caltech ITC Action"). Proposed

1 respondents included Omnivision, among others. The ITC instituted its
2 investigation on or about March 12, 2001 and terminated the proceeding on or
3 about October 30, 2001, as a result of settlement by the parties. In the Caltech ITC
4 Action, Omnivision alleged inequitable conduct of the '506 Patent.

5 105. During the pendency of the Omnivision District Court Litigation and
6 the Caltech ITC Action, patent applications that issued as the '842 patent, the '235
7 patent, the '326 patent, the '617 patent, the '838 patent, and the '122 patent were
8 pending before the USPTO. Patent applications that issued as the '068 patent, the
9 '166 patent, and the '059 patent were filed subsequent to the dismissal of the
10 Omnivision District Court Litigation and termination of the Caltech ITC Action.

11 106. The named inventor(s), the prosecuting attorney(s), and/or other
12 individual(s) associated with the filing and/or prosecution of applications for the
13 '068 patent, the '842 patent, the '235 patent, the '617 patent, the '166 patent, the
14 '326 patent, the '059 patent, the '838 patent, and the '122 patent were aware of the
15 Omnivision District Court Litigation and the Caltech ITC Action during the
16 prosecution of the applications that issued as the '842 patent, the '235 patent, the
17 '326 patent, the '617 patent, the '838 patent, the '122 patent, the '068 patent, the
18 '166 patent, and the '059 patent.

19 107. At least the existence of the Omnivision District Court Litigation and
20 the Caltech ITC Action and Caltech's positions on claim construction of claim
21 terms and invalidity positions would have been material to the examination of the
22 '068 patent, the '842 patent, the '235 patent, the '617 patent, the '166 patent, the
23 '326 patent, the '059 patent, the '838 patent, and the '122 patent in accordance with
24 37 C.F.R. § 1.56. Notwithstanding, the named inventor(s), the prosecuting
25 attorney(s), and/or other individual(s) associated with the filing and/or prosecution
26 of applications for the '842 patent, the '235 Patent, the '326 patent, the '617 patent,
27 the '838 patent, the '122 patent, the '068 patent, the '166 patent, and the '059 patent
28 failed to cite the existence of the Omnivision District Court Litigation and the

1 Caltech ITC Action, and material information arising therefrom, in the applications
2 that issued as the '068 patent, the '842 patent, the '235 patent, the '617 patent, the
3 '166 patent, the '326 patent, the '059 patent, the '838 patent, and the '122 patent.
4 On information and belief, the failure to cite such information was with the intent to
5 deceive the USPTO.

6 **III. INFECTIOUS UNENFORCEABILITY.**

7 108. On information and belief, the Patents-In-Suit are unenforceable due to
8 inequitable conduct based on the doctrine of infectious unenforceability because the
9 Applicants breached their duty of candor and good faith in dealing with the USPTO
10 by intentionally failing to properly disclose to the USPTO material information
11 and/or documents and/or fraudulently asserting statements to the USPTO with an
12 intent to deceive the USPTO in parent applications to those patents.

13 109. The '842 patent and the '068 patent are continuations of the '515
14 patent and the '232 patent. The Applicants' inequitable conduct with respect to the
15 '515 patent and '232 patent, discussed above, renders the '842 patent and '068
16 patent unenforceable based upon infectious unenforceability because the '842
17 patent and the '068 patent bear an immediate and necessary relation to the
18 inequitable conduct. The '842 patent and '068 patent did not face their own
19 substantive rejections over prior art and instead were only rejected based upon the
20 judicially created doctrine of nonstatutory double patenting because they were
21 deemed not patentably distinct from the claims of the '232 patent and the '842
22 patent, respectively.

23 110. The '235 patent is a continuation of the '126 patent, which itself is a
24 continuation of the '232 patent, which is a continuation-in-part of the '515 patent.
25 The '166 patent, the '617 patent and the '326 patent are divisionals of the '126
26 patent. The Applicants' inequitable conduct with respect to the '126 patent, the
27 '515 patent, and the '232 patent, discussed above, renders the '235 patent, the '166
28 patent, the '617 patent, and the '326 patent unenforceable based upon infectious

1 unenforceability because the '235 patent, the '166 patent, the '617 patent, and the
2 '326 patent bear an immediate and necessary relation to the inequitable conduct. In
3 particular, arguments for the patentability of the '126 patent, the '515 patent and the
4 '232 patent and the failure to properly cite prior art in the prosecution of those
5 patents directly affected the prosecution of the '235 patent, the '166 patent, the '617
6 patent and the '326 patent, which claim similar image sensor structures. Moreover,
7 Applicants' misrepresentations as to the priority claim of the '126 patent directly
8 affected the prosecution of the '235 patent, the '166 patent, the '617 patent and the
9 '326 patent, which claim direct priority thereto.

10 111. The '838 patent is a continuation of the '768 patent, which itself is a
11 continuation-in-part of the '232 patent, which is a continuation of the '515 patent.
12 The '059 patent is a divisional of the '503 patent, which itself is a continuation-in-
13 part of the '232 patent, which is a continuation of the '515 patent. The '483 patent
14 is a continuation-in-part of the '232 patent, which itself is a continuation of the '515
15 patent. Applicants' inequitable conduct with respect to the '515 patent, the '232
16 patent, the '768 patent and the '503 patent, discussed above, renders the '838
17 patent, the '059 patent, and the '483 patent unenforceable based upon infectious
18 unenforceability because the '838 patent, the '059 patent, and the '483 patent bear
19 an immediate and necessary relation to the inequitable conduct.

20 **CANON U.S.A.'S AND CANON INC.'S FIFTH AFFIRMATIVE DEFENSE**

21 **(Improper Marking or Notice)**

22 112. On information and belief, Caltech is barred in whole or in part from
23 recovering any alleged damages that occurred prior to the filing of the Complaint in
24 this action because Caltech failed to comply with the requirements of 35 U.S.C. §
25 287.

26 **CANON U.S.A.'S AND CANON INC.'S SIXTH AFFIRMATIVE DEFENSE**

27 **(Estoppel)**

28 113. On information and belief, Caltech is barred in whole or in part from

1 recovering any alleged damages by the application of the doctrine of equitable
2 estoppel, including but not limited to the doctrine of prosecution history estoppel.

3 **CANON U.S.A.'S AND CANON INC.'S SEVENTH AFFIRMATIVE**
4 **DEFENSE**

5 **(Patent Misuse and Unclean Hands)**

6 114. On information and belief, Caltech is barred in whole or in part from
7 recovering any alleged applications by the application of the doctrines of patent
8 misuse and/or unclean hands.

9 115. Canon U.S.A. and Canon Inc. reserve the right to amend their Answer
10 to assert further affirmative defenses based on future discovery in this suit.

11 **PLAINTIFF'S PRAYER FOR RELIEF**

12 116. Wherefore Canon U.S.A. and Canon Inc. deny each and every
13 allegation contained in the Prayer for Relief in Plaintiff's First Amended
14 Complaint, and specifically deny that Caltech is entitled to any judgment against
15 Canon U.S.A. or Canon Inc., to any of the relief described therein, or to any remedy
16 whatsoever against Canon U.S.A. and Canon Inc.

17 **CANON U.S.A.'S COUNTERCLAIMS**

18 **Parties**

19 117. Canon U.S.A., Inc. ("Canon U.S.A.") is a corporation organized under
20 the laws of New York, having its principal place of business at One Canon Plaza,
21 Lake Success, New York 11042-1113.

22 118. Upon information and belief, California Institute of Technology
23 ("Caltech") is a private university having its principal place of business in
24 Pasadena, California, as alleged in Plaintiff's First Amended Complaint. Upon
25 further information and belief, Caltech is active in the business of commercializing
26 technology development through the licensing of intellectual property to people
27 located both within California and nationally.

28 119. This Court has subject matter jurisdiction over Canon U.S.A.'s

1 counterclaims for declaratory judgments of non-infringement, invalidity and
2 unenforceability pursuant to 28 U.S.C. §§ 1331, 1338 and 2201.

3 120. This Court has personal jurisdiction over these counterclaims both
4 because Caltech has conducted and does conduct business within the State of
5 California, and because of the already-pending action initiated by Caltech.

6 121. Venue for these counterclaims is proper in this judicial district
7 pursuant to 28 U.S.C. §§ 1391 and 1400(b).

8 **First Counterclaim – Declaratory Judgment of Non-Infringement**

9 122. Canon U.S.A. restates and incorporates the allegations set forth above
10 as if fully set forth herein.

11 123. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
12 Complaint, infringing and has not infringed (directly, by inducement,
13 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
14 Patent No. 5,990,506.

15 124. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
16 Complaint, infringing and has not infringed (directly, by inducement,
17 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
18 Patent No. 6,456,326.

19 125. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
20 Complaint, infringing and has not infringed (directly, by inducement,
21 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
22 Patent No. 6,549,235.

23 126. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
24 Complaint, infringing and has not infringed (directly, by inducement,
25 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
26 Patent No. 6,555,842.

27 127. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
28 Complaint, infringing and has not infringed (directly, by inducement,

1 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
2 Patent No. 6,570,617.

3 128. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
4 Complaint, infringing and has not infringed (directly, by inducement,
5 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
6 Patent No. 6,744,068.

7 129. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
8 Complaint, infringing and has not infringed (directly, by inducement,
9 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
10 Patent No. 5,949,483.

11 130. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
12 Complaint, infringing and has not infringed (directly, by inducement,
13 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
14 Patent No. 6,606,122.

15 131. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
16 Complaint, infringing and has not infringed (directly, by inducement,
17 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
18 Patent No. 6,943,838.

19 132. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
20 Complaint, infringing and has not infringed (directly, by inducement,
21 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
22 Patent No. 6,825,059.

23 133. Canon U.S.A. is not, as Caltech alleges in Plaintiff's First Amended
24 Complaint, infringing and has not infringed (directly, by inducement,
25 contributorily, or in any other way) any valid and enforceable assert claim of U.S.
26 Patent No. 7,369,166.

27 134. Caltech, by way of Plaintiff's First Amended Complaint, has raised
28 legal and factual questions as to Canon U.S.A.'s alleged infringement of these

1 certain patents. To resolve these questions and to afford Canon U.S.A. relief from
2 the uncertainty and controversy raised by Caltech's allegations and Plaintiff's First
3 Amended Complaint, Canon U.S.A. is entitled to a declaratory judgment that it
4 does not infringe any valid and asserted claim of any of the patents alleged by
5 Caltech, including the '506 patent, the '326 patent, the '235 patent, the '842 patent,
6 the '617 patent, the '068 patent, the '483 patent, the '122 patent, the '838 patent,
7 the '059 patent and the '166 patent (collectively the "Patents-In-Suit").

8 **Second Counterclaim – Declaratory Judgment of Invalidity**

9 135. Canon U.S.A. restates and incorporates the allegations set forth above
10 as if fully set forth herein.

11 136. Each claim of U.S. Patent No. 5,990,506 is invalid for failing to
12 comply with one or more of the conditions and requirements of the patent laws of
13 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
14 and the rules, regulations and laws pertaining to these provisions.

15 137. Each claim of U.S. Patent No. 6,456,326 is invalid for failing to
16 comply with one or more of the conditions and requirements of the patent laws of
17 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
18 and the rules, regulations and laws pertaining to these provisions.

19 138. Each claim of U.S. Patent No. 6,549,235 is invalid for failing to
20 comply with one or more of the conditions and requirements of the patent laws of
21 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
22 and the rules, regulations and laws pertaining to these provisions.

23 139. Each claim of U.S. Patent No. 6,555,842 is invalid for failing to
24 comply with one or more of the conditions and requirements of the patent laws of
25 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
26 and the rules, regulations and laws pertaining to these provisions.

27 140. Each claim of U.S. Patent No. 6,570,617 is invalid for failing to
28 comply with one or more of the conditions and requirements of the patent laws of

1 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
2 and the rules, regulations and laws pertaining to these provisions.

3 141. Each claim of U.S. Patent No. 6,744,068 is invalid for failing to
4 comply with one or more of the conditions and requirements of the patent laws of
5 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
6 and the rules, regulations and laws pertaining to these provisions.

7 142. Each claim of U.S. Patent No. 5,949,483 is invalid for failing to
8 comply with one or more of the conditions and requirements of the patent laws of
9 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
10 and the rules, regulations and laws pertaining to these provisions.

11 143. Each claim of U.S. Patent No. 6,606,122 is invalid for failing to
12 comply with one or more of the conditions and requirements of the patent laws of
13 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
14 and the rules, regulations and laws pertaining to these provisions.

15 144. Each claim of U.S. Patent No. 6,943,838 is invalid for failing to
16 comply with one or more of the conditions and requirements of the patent laws of
17 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
18 and the rules, regulations and laws pertaining to these provisions.

19 145. Each claim of U.S. Patent No. 6,825,059 is invalid for failing to
20 comply with one or more of the conditions and requirements of the patent laws of
21 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
22 and the rules, regulations and laws pertaining to these provisions.

23 146. Each claim of U.S. Patent No. 7,369,166 is invalid for failing to
24 comply with one or more of the conditions and requirements of the patent laws of
25 the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112,
26 and the rules, regulations and laws pertaining to these provisions.

27 147. Caltech, by way of Plaintiff's First Amended Complaint, has raised
28 legal and factual questions as to Canon U.S.A.'s alleged infringement of these

1 certain patents. To resolve these questions and to afford Canon U.S.A. relief from
2 the uncertainty and controversy raised by Caltech's allegations and Plaintiff's First
3 Amended Complaint, Canon U.S.A. is entitled to a declaratory judgment that the
4 '506 patent, the '326 patent, the '235 patent, the '842 patent, the '617 patent, the
5 '068 patent, the '483 patent, the '122 patent, the '838 patent, the '059 patent and the
6 '166 patent are invalid for failure to comply with one or more of the conditions and
7 requirements of the patent laws of the United States, including but not limited to 35
8 U.S.C. §§ 101, 102, 103 and 112, and the rules, regulations and laws pertaining to
9 these provisions.

10 **Third Counterclaim – Declaratory Judgment of Unenforceability**

11 148. Canon U.S.A. restates and incorporates the allegations set forth above
12 as if fully set forth herein.

13 149. All of the Patents-In-Suit are void and unenforceable because the
14 named inventor(s), the prosecuting attorney(s), and/or other individual(s) having a
15 duty of candor and good faith dealing with the United States Patent and Trademark
16 Office (the "USPTO") (collectively "Applicants") breached their duty in the
17 prosecution of the applications that led to the issuance of the Patents-In-Suit by
18 failing to properly disclose to the USPTO material information and by making false
19 and misleading statements, with intent to deceive the USPTO, either: (1) directly in
20 prosecuting the Patents-In-Suit; or (2) indirectly in prosecuting patents related to
21 the Patents-In-Suit (the "Parent Patents"), through the doctrine of infectious
22 unenforceability.

23 150. The prosecuting attorney(s) and/or other individual(s) associated with
24 the filing and/or prosecution of the Parent Patents and the Patents-In-Suit include,
25 at least, the named inventors of the Patents-In-Suit, patent attorneys Robert M.
26 Wallace and Scott C. Harris, and, based on information and belief, at least one or
27 more employees of Caltech who were responsible for overseeing the filing and/or
28 prosecution of the Parent Patents and the Patents-In-Suit.

1 151. Under 37 C.F.R. § 1.56, each individual associated with the filing
2 and/or prosecution of a patent application has, during the pendency of that
3 application, a duty of candor and good faith in dealing with the USPTO, which
4 includes a duty to disclose to the USPTO all information known to those
5 individuals to be material to the patentability of the pending claims.

6 152. All the named inventors of the Parent Patents and the Patents-In-Suit
7 expressly acknowledged their duty of disclosure as defined by 37 C.F.R. § 1.56 to
8 disclose all information known to them which would be material to the patentability
9 in declarations filed with the USPTO.

10 153. Under 37 C.F.R. § 10.18(b), which was in effect during the pendency
11 of each of the Patents-In-Suit and the Parent Patents, patent attorneys and patent
12 agents involved in the filing and/or prosecution of a patent application were under a
13 duty to make a reasonable inquiry as to truth and propriety before submitting a
14 paper to the USPTO.

15 154. Actions and omissions by Applicants in the prosecution of U.S. Patent
16 No. 5,471,515 (“the ‘515 patent”), U.S. Patent No. 6,101,232 (“the ‘232 patent”),
17 and U.S. Patent No. 5,841,126 (“the ‘126 patent”); U.S. Patent No. 6,166,768 (“the
18 ‘768 patent”) and U.S. Patent No. 6,486,503 (“the ‘503 patent”) render the Patents-
19 In-Suit unenforceable under the doctrine of infectious unenforceability.

20 **I. AFFIRMATIVE MISREPRESENTATIONS TO THE USPTO.**

21 **A. Kemeny Declaration (The ‘515 and ‘232 Patents).**

22 155. On September 29, 1994, Sabrina Kemeny, a named co-inventor of the
23 ‘515 patent, executed a declaration in support of the ‘515 patent application and in
24 response to the USPTO’s rejection of the pending application claim. [Exhibit A
25 hereto (the “Kemeny Decl.”)]

26 156. After describing her academic achievements and experience in the
27 field of the art, Kemeny averred in her declaration that “[a]ll CCD imagers have
28 been limited by the necessity of sharing a common read-out circuit among plural

pixels.” [Exhibit A hereto, at 1]. Kemeny also averred:

the present invention ... provides the first CCD imaging circuit having one read-out circuit for each pixel or photogate. Nothing in the art would suggest one read-out circuit per photogate.... This combination of features makes possible for the first time the one-pixel-per-readout circuit structure of the invention and was first disclosed in the applicant’s specification.

[Exhibit A hereto, at 2].

157. Articles authored by Kemeny and/or other ’515 patent named co-inventors Eric R. Fossum and Sunetra K. Mendis show that prior to the Kemeny Decl., Kemeny and the other named co-inventors of the ’515 patent were aware of prior art publications teaching one read-out circuit for each pixel. Examples of these articles include, but are not limited to:

- A. Mendis, Sunetra K., Kemeny, Sabrina E., Gee, Russell C., Pain Bedabrata, Kim Quiesup, and Fossum, Eric. R., *Progress in CMOS Active Pixel Image Sensors*, SPIE (1994) (the “1994 Mendis Article”) [Exhibit B hereto];
- B. Fossum, Eric R., *Active Pixel Sensors: Are CCDs Dinosaurs?*, Proc. SPIE, col. 1900, pp. 2-14, 1993 (the “Fossum Dinosaurs Article”) [Exhibit C hereto];
- C. Kemeny, Sabrina E., Eid, El-Sayed, Mendis, Sunetra, and Fossum, Eric R., *Update on focal-plane image processing research*, SPIE Vol. 1447 Charge-Coupled Devices and Solid State Optical Sensors II (1991) (the “Kemeny Focal-Plane Article”) [Exhibit D hereto];
- D. Fossum, Eric R., *Architectures for Focal-plane Image Processing*, Opt. Eng., vol. 28(8), 865-871 (1989) (the “1989 Fossum Architecture Article”) [Exhibit E hereto].

158. The 1994 Mendis Article, which also lists Kemeny and Fossum as authors, defines an active pixel sensor as “an image sensor technology that has one

1 or more active transistors within the pixel unit cell". The 1994 Mendis Article
2 further cites to at least five references in its "Introduction" that disclose such a
3 structure and that qualify as prior art to the '515 patent application and the Patents-
4 In-Suit.

5 159. The Fossum Dinosaurs Article, authored by Fossum, similarly
6 identifies numerous prior art references in its "State-Of-The-Art" section disclosing
7 active pixel sensors having one readout circuit per pixel.

8 160. The Kemeny Focal-Plane Article, which also lists Mendis and Fossum
9 as authors, describes research into incorporating image processing into CCD image
10 sensors, referred to as "Focal-plane image processing." The Kemeny Focal-Plane
11 Article provides experimental results obtained with imaging devices made by the
12 group and cites to the 1989 Fossum Architecture Article.

13 161. The 1989 Fossum Architecture Article describes the use of a
14 CCD/CMOS process, the combination of a photoreceptor and processing element in
15 a combined pixel unit cell and that the processing element can include
16 buffer/amplifier functions for the pixel unit cell or more sophisticated functions.

17 162. On information and belief, in view of the foregoing publications by the
18 named inventor of the '515 patent, Kemeny knew of the foregoing teachings in the
19 prior art. The Kemeny Decl., therefore, knowingly contained material false and
20 misleading statements submitted with an intent to deceive the USPTO.

21 163. Through an October 11, 1994 Amendment, Applicants submitted and
22 relied on the Kemeny Decl. to argue for the patentability of the then pending '515
23 patent application claims.

24 164. On information and belief, the Applicants committed inequitable
25 conduct by submitting and relying on the false and misleading Kemeny Decl. in the
26 October 11, 1994 Amendment, with an intent to deceive the USPTO in order to
27 obtain the issuance of the '515 patent. The false statements were material to the
28 examination of the application that issued as the '515 patent.

1 165. Through a November 16, 1995 Amendment, Applicants relied on the
2 Kemeny Decl. to argue for the patentability of the then pending '232 patent
3 application claims.

4 166. On information and belief, the Applicants committed inequitable
5 conduct by submitting and relying on the false and misleading Kemeny Decl., in
6 the November 16, 1995 Amendment, with an intent to deceive the USPTO in order
7 to obtain the issuance of the '232 patent. The false statements were material to the
8 examination of the application that issued as the '232 patent.

9 **B. Misleading Claim to Priority (the '126 and '483 Patents).**

10 167. The '126 patent is a continuation-in-part of the '232 patent and claims
11 priority to the '232 patent and a provisional patent application, 60/010,678 filed on
12 January 26, 1996.

13 168. In an October 28, 1997 Office Action, the claims of the '126 patent
14 application were rejected pursuant to 35 U.S.C. 102(e) over U.S. Patent No.
15 5,461,425, which was filed on October 24, 1994.

16 169. In response, in an amendment dated January 28, 1998, the Applicants
17 argued that claim 1 of the '126 patent was entitled to the benefit of the filing date of
18 '515 patent. Specifically, it was stated that:

19 Claim 1 is entitled to the priority date of the parent
20 (January 28, 1994) because the parent includes a substrate
21 having an array of pixels and a control area. The pixels
22 are disclosed to be light collecting elements which each
23 receive light and store electronic information in an
24 amount indicative of an amount of light received during
25 an integration period (see, e.g., column 3, lines 22-24 of
the above '515 patent). The control area includes a
readout circuit (element 70 of the '515 patent). The
circuitry in the control area is CMOS (column 4, lines 59-
61), and the pixel area is compatible with CMOS (column
4, lines 40-42). The timing element is that which controls,
e.g., the integration period.

26 [January 28, 1998 Amendment at 2-3].

27 170. Contrary to the Applicants assertions, the '515 patent does not disclose
28 (1) a timing element; (2) a control area outside of the pixel area, or (3) that the

1 readout circuitry is a "control area".

2 171. With regard to the '483 patent, in response to a rejection by the
3 USPTO, in an Amendment on October 7, 1998 the Applicants intentionally made
4 false statements and misleadingly argued that Mandl (prior art cited in an
5 obviousness rejection of the then pending claims 1-4, 6-7, 12-13, 16-17, and 21)
6 "did not constitute prior art ... [because it] was filed later than the priority date of
7 the claim limitation on the active pixel sensor cited in Claims 1-4, 6-7, 12-13, 16-
8 17, and 21, which is January 28, 1994, based on the parent application No.
9 08/188,032, now U.S. Patent No. 5,471,515." ('483 Patent File History, October 7,
10 1998 Amendment (emphasis in original)).

11 172. However, then pending claims 1-4, 6-7, 12-13, 16-17, and 21 lacked
12 support in the '515 patent and, as a result, were not entitled to the filing date of the
13 '515 patent as a priority date. Therefore, contrary to the argument in the
14 Amendment, Mandl could not be predated and instead stood as material prior art to
15 the claims of the '483 patent application.

16 173. On information and belief, the Applicants committed inequitable
17 conduct by making these statements with intent to deceive the USPTO as to the
18 correct priority date for the claims of the '126 patent and '483 patent and, thereby
19 avoid invalidating prior art.

20 **C. Misleading Arguments for Patentability (the '506 Patent).**

21 174. The '506 patent claims priority to provisional patent application no.
22 60/013,700, which was filed on March 20, 1996.

23 175. On February 19, 1999, in response to a USPTO rejection, Applicants
24 admitted that the prior art references applied by the USPTO individually taught the
25 features recited in certain claims of the '506 patent application, an active pixel
26 sensor array and a color filter, but argued that there was not motivation to combine
27 these features.

28 176. The Fossum Dinosaurs article, however, expressly discusses a prior art

reference that discloses an active pixel sensor with a color filter array.

177. On information and belief, in view of the foregoing, Applicants committed inequitable conduct in attempting to obtain allowance of the '506 patent by stating to the USPTO with intent to deceive that there was no motivation to combine active pixel sensors with color filter arrays.

II. FAILURE TO CITE MATERIAL INFORMATION TO THE USPTO.

A. Prior Art Materials.

178. Applicants authored numerous publications that are either material prior art or that cite to prior art publications material to Applicants' inventions. Applicants failed to cite these highly material, non-cumulative prior art references in the applications of both the Patents-In-Suit, as well as in the applications of the Parent Patents.

179. Publications authored by the named inventors in the 1980s and 1990s describe the alleged inventions disclosed and claimed by the Patents-In-Suit. These same publications also identify a number of publications authored by third-parties that are material to inventions claimed in the Patents-In-Suit. Examples of publications authored by the Inventors that are material prior art to the Patent-In-Suit or cite to material prior art, include, but are not limited to:

- A. The 1994 Mendis Article;
- B. The Fossum Dinosaurs Article;
- C. The Kemeny Focal-Plane Article;
- D. The 1989 Fossum Architecture Article;
- E. Fossum, Eric R., *On-Chip Focal-Plane Image Processing*, Proc. of 1991 Symposium on Advanced Image-Acquisition Technology (SAIT91), pp. 48-56, T. Ando, ed., Tokyo, Japan, (November 1991) (the "1991 Fossum Focal-Plane Image Processing Article") [Exhibit F hereto];

- 1 F. Fossum, Eric R., *Future Directions In Focal-Plane Signal*
2 *Processing For Space-Borne Scientific Imagers*, Proc. SPIE vol.
3 1541, pp. 62-67 (1991) (the "1991 Fossum Future Directions
4 Article") [Exhibit G hereto];
- 5 G. Eid, E-S, et al., *CMOS Active Pixel Image Sensors for Low Cost*
6 *Application*, ICECS '94, December 1994, Cairo, Egypt (the
7 "1994 Eid Article"), co-authored by named inventor Fossum
8 [Exhibit H hereto];
- 9 H. Fossum, Eric R., *Ultra Low Power Imaging Systems Using*
10 *CMOS Image Sensor Technology*, SPIE Vol. 2267, pp. 107 -
11 111 (1994) (the "Fossum Ultra Low Power Article") [Exhibit I
12 hereto];
- 13 I. Fossum, Eric R., *Assessment of Image Sensor Technology for*
14 *Future NASA Missions*, SPIE vol. 2172, pp. 1 - 16 (1994) (the
15 "Fossum Future NASA Missions Article") [Exhibit J hereto];
- 16 J. S. Mendis, B. Pain, R. Nixon, and E.R. Fossum, *Design Of A*
17 *Low-Light-Level Image Sensor With On-Chip Sigma-Delta*
18 *Analog-To-Digital Conversion*, CCD's and Optical Sensors III,
19 Proc. SPIE vol. 1900, pp. 31-39 (1993) (the "Mendis 1993 A-to-
20 D Article") [Exhibit K hereto];
- 21 K. Fossum, Eric R., *CMOS Image Sensors: Electronic Camera on*
22 *a Chip*, IEEE 1.3.1 - 1.3.9 (1995) (the "Fossum Camera on a
23 Chip Article") [Exhibit L hereto];
- 24 L. Kemeny, B. Pain, E. Fossum, L. Matthies, and R. Panicacci,
25 *Multiresolution Image Sensor Using Switched Capacitor*
26 *Circuits*, Proc. 1994 International CMOS Camera Workshop,
27 Holmdel NJ, October 17-18, 1994 [Exhibit M hereto];
- 28 M. Gee, Russell C., et al., *Development of CMOS Active Pixel*

1 *Image Sensors for Low Cost Commercial Applications*, Proc. of
 2 NASA Technology 2004, Washington DC, November 1994
 3 (Nov. 1994) (the "1994 Gee Article") co-authored by inventors
 4 Fossum, Mendis, Kemeny and Nixon [Exhibit N hereto];

5 N. Fossum, Eric R., et al., *Development of CM(X [sic] Active Pixel*
 6 *Image Sensors for Low Cost Commercial Applications* (June
 7 1994) (the "1994 Fossum Development Article") [Exhibit O
 8 hereto];

9 O. Mendis, Sunetra K., *CMOS Active Pixel Image Sensors with On-*
 10 *Chip Analog-to-Digital Conversion*, Thesis (Ph. D.) – Columbia
 11 University (1995) (the "1995 Mendis Thesis") [Exhibit P
 12 hereto]; and

13 P. Mendis, Sunetra K., Kemeny, Sabrina, E., Fossum, Eric R., *A*
 14 *128 x 128 CMOS Active Pixel Image Sensor for Highly*
 15 *Integrated Imaging Systems*, IEDM 93, pp. 583-86 (1993) (the
 16 "1993 Mendis Article") [Exhibit Q hereto].

17 180. Applicants were aware of a number of material prior art references
 18 prior to and during the pendency of prosecution of the Patents-In-Suit and the
 19 Parent Patents as evidenced by their citation to those references in articles authored
 20 by the inventors, such as the articles listed above. Examples of material prior art
 21 references include, but are not limited to:

22 A. Yadid-Pecht, O., et al., *A Random Access Photodiode Array for*
 23 *Intelligent Image Capture*, IEEE Trans. on Electron Devices,
 24 vol. 38, no. 8, pp. 1772-1780 (Aug. 1991) (the "1991 Yadid-
 25 Pecht Article") [Exhibit R hereto], cited in, for example, the
 26 1994 Mendis Article and the Fossum Dinosaurs Article;

27 B. Hynecek, J., *BCMD – An Improved Photosite Structure for High*
 28 *Density Sensors*, IEEE Transactions on Electron Devices, vol.,

38(5), pp. 1011-1020 (May 1991) (the “1991 Hynecek Article”) [Exhibit S hereto], cited in, for example, the 1994 Mendis Article and the Fossum Dinosaurs Article;

- C. Kyomasu, M., *A New MOS Imager Using Photodiode as Current Source*, *IEEE Journal of Solid-State Circuits*, vol. 26, no. 8, pp. 1116-1122 (1991) (the “1991 Kyomasu Article”) [Exhibit T hereto], cited in, for example, the Fossum Camera on a Chip Article;
- D. Andoh, F., et al., *A 250,000-Pixel Image Sensor with FET Amplification at Each Pixel for High-Speed Television Cameras*, 1990 IEEE International Solid-State Circuits Conference (1990) (the “1990 Andoh Article”) [Exhibit U hereto], cited in, for example, the Fossum Camera on a Chip Article;
- E. Chen, K., et al, *PASIC: A Processor – A/D converter-Sensor Integrated Circuit*, IEEE, pp. 1705-1708 (1990) (“the 1990 Chen Article”) [Exhibit V hereto], cited in, for example, the Fossum Camera on a Chip Article;
- F. D. Renshaw, et al. *ASIC Vision*, 1990 IEEE CICC Proc., pp 7.3.1-7.3.4 (1990) (“ASIC Vision”) [Exhibit W hereto], cited in, for example, the 1994 Eid Article; and
- G. Forchheimer, R., et al., *MAPP2200 – A Second generation smart optical sensor*, Proc. SPIE, vol. 1659, pp. 2-11 (1992) (the “1992 Forchheimer Article”) [Exhibit X hereto], cited in, for example, the Fossum Camera on a Chip Article.

181. On information and belief, the Patents-In-Suit and the Parent Patents were procured by inequitable conduct, rendering them unenforceable in their entirety. In the applications leading to the Patents-In-Suit and the Parent Patents, Applicants failed to disclose to the USPTO material references relevant to the

1 prosecution with intent to deceive. Based on the fact that these references are
2 Applicants' own publications describing the technology at issue in the Patents-In-
3 Suit and the Parent Patents or third-party prior art references cited in such
4 publications as being relevant to Applicants' technology, Applicants were aware of
5 these prior art references and intentionally failed to provide these references with
6 the intent to deceive the USPTO. The references identified as omitted by
7 Applicants herein are illustrative. Canon U.S.A. reserves the right to amend its
8 answer and counterclaims to state additional misrepresentations and/or omissions as
9 it learns of them through the course of discovery in this action.

10 182. With respect to the '515 patent and the '232 patent Applicants
11 committed inequitable conduct through their failure to cite at least the following
12 exemplary references material to the patentability of these patents: (i) the Kemeny
13 Focal-Plane Article; (ii) the 1991 Fossum Focal-Plane Image Processing Article;
14 (iii) the 1991 Fossum Future Directions Article; (iv) the 1989 Fossum Architecture
15 Article; (v) the 1991 Yadid-Pecht Article; (vi) the 1991 Hyncek Article; (vii) the
16 1991 Kyomasu Article; (viii) the 1990 Andoh Article; (ix) the 1990 Chen Article;
17 (x) the ASIC Vision Article; (xi) the 1992 Forcheimer Article; and (xii) the Fossum
18 Dinosaurs Article.

19 183. With respect to the '126 patent, the '503 patent, the '059 patent and the
20 '838 patent Applicants committed inequitable conduct through their failure to cite
21 at least each of the exemplary prior art references disclosed in Paragraphs 179 and
22 180 above which are material to the patentability of these patents.

23 184. With respect to the '122 patent application Applicants committed
24 inequitable conduct through their failure to cite at least each of the exemplary prior
25 art references disclosed in Paragraphs 179 and 180 above (with the exception of the
26 Fossum Camera on a Chip Article, which was cited), which are material to the
27 patentability of this patent.

28 185. With respect to the applications for the '506 patent and the '483 patent,

1 Applicants committed inequitable conduct through their failure to cite at least each
2 of the exemplary prior art references disclosed in Paragraphs 179 and 180 above
3 (with the exception of the 1994 Mendis Article, which was cited), which are
4 material to the patentability of these patents.

5 186. With respect to the applications leading to the '842 patent, the '068
6 patent, the '166 patent, the '617 patent, the '326 patent, and the '235 patent,
7 Applicants committed inequitable conduct through their failure to cite at least the
8 following exemplary references material to the patentability of these patents: (i) the
9 Kemeny Focal-Plane Article; (ii) the 1991 Fossum Focal-Plane Image Processing
10 Article; (iii) the 1991 Fossum Future Directions Article; (iv) the 1994 Eid Article;
11 and (v) the Fossum Ultra Low Power Article.

12 187. With respect to the '842 patent, the '068 patent, the '166 patent, the
13 '617 patent, the '326 patent, and the '235 patent, Applicants committed inequitable
14 conduct by burying certain references. For example, even though the 1991 Yadid-
15 Pecht Article, the 1991 Kyomasu Article, the 1990 Chen Article, and the 1990
16 Andoh Article were material, the Applicants of the '842 patent and the '068 patent
17 failed to properly disclose these references to the USPTO. On information and
18 belief, the Applicants buried the references among more than 100 other references
19 with an intent to deceive and/or mislead the USPTO in order to obtain issuance of
20 the '842 patent and the '068 patent. Also, even though the 1991 Yadid-Pecht
21 Article, the 1991 Kyomasu Article, the 1990 Chen Article, the 1990 Andoh Article,
22 the 1993 Mendis Article, and the 1994 Mendis Article were material, based on
23 information and belief, the Applicants of the '166 patent, the '617 patent, the '326
24 patent, and the '235 patent intentionally failed to properly disclose these references
25 to the USPTO and instead buried these references among many other references
26 which were not as material or relevant. On information and belief, this was done
27 with intent to deceive the USPTO in order to obtain issuance of the '166 patent, the
28 '617 patent, the '326 patent, and the '235 patent

1 188. In addition to the prior art references related to the Applicants'
2 publications discussed above, the '842 patent is also unenforceable due to
3 inequitable conduct arising from Applicants' failure to properly cite prior art
4 references that were cited by the USPTO during prosecution of the '232 patent (the
5 immediate parent of the '842 patent).

6 189. The Examiner of the '232 patent application rejected claims in an
7 Office Action dated July 2, 1997, specifically using the following references: (i)
8 U.S. Patent No. 4,407,010 to Baji et al.; (ii) U.S. Patent No. 5,563,429 to Isogai;
9 (iii) U.S. Patent No. 4,093,782 to Hartman et al.; (iv) U.S. Patent No. 4,155,094 to
10 Ohba et al.; (v) U.S. Patent No. 3,623,132 to Green; (vi) U.S. Patent No. 4,287,441
11 to Smith; (vii) U.S. Patent No. 4,683,580 to Matsunaga; (viii) U.S. Patent No.
12 5,323,052 to Koyama; and (ix) JP Pub. No. 5235317 (collectively, "the '232 patent
13 references").

14 190. On June 27, 2000, the '842 patent application was filed with
15 substantially identical claims as were previously rejected in the '232 patent
16 application. A list of references was filed concurrently with the '842 patent
17 application, listing the '232 patent references. Thereafter, however, in an Office
18 Action the Examiner notified the Applicants that "[t]he list of references in the
19 specification filed on June 27/2000 [sic] is not a proper information disclosure
20 statement.... Therefore, unless the references have been cited by the examiner on
21 form PTO-892, they are not been [sic] considered." The '232 patent references
22 were never resubmitted in a proper manner, and the Examiner never considered
23 them, as indicated by the fact that the Examiner struck-through the '232 patent
24 references on the list provided with the '842 patent application.

25 191. On information and belief, the Applicants therefore intentionally
26 withheld material references from the Examiner during the '842 patent prosecution.
27 Despite having received express notice of their failure to properly submit the '232
28 patent references the Applicants still intentionally failed to remedy this material

1 omission.

2 **B. Omnivision Litigation.**

3 192. The '068 patent, the '842 patent, the '235 patent, the '617 patent, the
4 '166 patent, the '326 patent, the '059 patent, the '838 patent, and the '122 patent are
5 unenforceable due to inequitable conduct based on the failure of the Applicants to
6 cite to the USPTO the existence of litigations involving the '126 patent and
7 material information arising therefrom.

8 193. The Manual of Patent Examining Procedure ("MPEP"), in Section
9 2001.06(c), states that: "Where the subject matter for which a patent is sought is or
10 has been involved in litigation, the existence of such litigation and any other
11 material information arising therefrom must be brought to the attention of the
12 Patent and Trademark Office."

13 194. Section 2001.06(c) of the MPEP was in effect during the litigations
14 involving the '126 patent and during the prosecution of the '068 patent, the '842
15 patent, the '235 patent, the '617 patent, the '166 patent, the '326 patent, the '059
16 patent, the '838 patent, and the '122 patent.

17 195. On October 13, 2000, Omnivision Technologies Inc. ("Omnivision")
18 filed suit in the United States District Court for the Northern District of California
19 against Photobit Corporation and Caltech seeking a declaratory judgment of non-
20 infringement and invalidity of the '126 patent and other patents (the "Omnivision
21 District Court Litigation"). The Omnivision District Court Litigation advanced
22 through *Markman* briefing in which Caltech and the other parties briefed their
23 respective positions on disputed claim terms in the '126 patent and other patents.
24 For the '126 patent, Caltech briefed its position on the following claim terms that
25 are, in whole or in part, claim terms in the '068 patent, the '842 patent, the '235
26 patent, the '617 patent, the '166 patent, the '326 patent, the '059 patent, the '838
27 patent, and the '122 patent: (i) "A camera on a chip;" (ii) "pixel;" (iii) "light
28 collecting elements which each receive light and store an electronic information in

1 an amount indicative of an amount of light received during an integration period;”
2 (iv) “timing element;” (v) “readout control element;” (vi) “compatible with
3 CMOS;” (vii) “An imaging system on a single substrate;” and (viii) “a latch
4 element storing values to be used in said timing element.” On September 24, 2001,
5 the court dismissed the case with prejudice. A true and correct copy of the Joint
6 Claim Construction and Prehearing Statement from the Omnivision District Court
7 Litigation, filed on July 10, 2001, is attached hereto as Exhibit Y. A true and
8 correct copy of Photobit Corporation and California Institute of Technology’s
9 Opening Markman Claim Construction Brief from the Omnivision District Court
10 Litigation, filed on August 23, 2001, is attached hereto as Exhibit Z.

11 196. On or about February 2001, Photobit Corporation and Caltech filed a
12 Section 337 action before the U.S. International Trade Commission (“ITC”)
13 seeking an exclusionary order pertaining to products alleged to infringe the ’126
14 patent, the ’506 patent and a third patent (the “Caltech ITC Action”). Proposed
15 respondents included Omnivision, among others. The ITC instituted its
16 investigation on or about March 12, 2001 and terminated the proceeding on or
17 about October 30, 2001, as a result of settlement by the parties. In the Caltech ITC
18 Action, Omnivision alleged inequitable conduct of the ’506 Patent.

19 197. During the pendency of the Omnivision District Court Litigation and
20 the Caltech ITC Action, patent applications that issued as the ’842 patent, the ’235
21 patent, the ’326 patent, the ’617 patent, the ’838 patent, and the ’122 patent were
22 pending before the USPTO. Patent applications that issued as the ’068 patent, the
23 ’166 patent, and the ’059 patent were filed subsequent to the dismissal of the
24 Omnivision District Court Litigation and termination of the Caltech ITC Action.

25 198. The named inventor(s), the prosecuting attorney(s), and/or other
26 individual(s) associated with the filing and/or prosecution of applications for the
27 ’068 patent, the ’842 patent, the ’235 patent, the ’617 patent, the ’166 patent, the
28 ’326 patent, the ’059 patent, the ’838 patent, and the ’122 patent were aware of the

1 Omnivision District Court Litigation and the Caltech ITC Action during the
2 prosecution of the applications that issued as the '842 patent, the '235 patent, the
3 '326 patent, the '617 patent, the '838 patent, the '122 patent, the '068 patent, the
4 '166 patent, and the '059 patent.

5 199. At least the existence of the Omnivision District Court Litigation and
6 the Caltech ITC Action and Caltech's positions on claim construction of claim
7 terms and invalidity positions would have been material to the examination of the
8 '068 patent, the '842 patent, the '235 patent, the '617 patent, the '166 patent, the
9 '326 patent, the '059 patent, the '838 patent, and the '122 patent in accordance with
10 37 C.F.R. § 1.56. Notwithstanding, the named inventor(s), the prosecuting
11 attorney(s), and/or other individual(s) associated with the filing and/or prosecution
12 of applications for the '842 patent, the '235 Patent, the '326 patent, the '617 patent,
13 the '838 patent, the '122 patent, the '068 patent, the '166 patent, and the '059 patent
14 failed to cite the existence of the Omnivision District Court Litigation and the
15 Caltech ITC Action, and material information arising therefrom, in the applications
16 that issued as the '068 patent, the '842 patent, the '235 patent, the '617 patent, the
17 '166 patent, the '326 patent, the '059 patent, the '838 patent, and the '122 patent.
18 On information and belief, the failure to cite such information was with the intent to
19 deceive the USPTO.

20 **III. INFECTIOUS UNENFORCEABILITY.**

21 200. On information and belief, the Patents-In-Suit are unenforceable due to
22 inequitable conduct based on the doctrine of infectious unenforceability because the
23 Applicants breached their duty of candor and good faith in dealing with the USPTO
24 by intentionally failing to properly disclose to the USPTO material information
25 and/or documents and/or fraudulently asserting statements to the USPTO with an
26 intent to deceive the USPTO in parent applications to those patents.

27 201. The '842 patent and the '068 patent are continuations of the '515
28 patent and the '232 patent. The Applicants' inequitable conduct with respect to the

1 '515 patent and '232 patent, discussed above, renders the '842 patent and '068
2 patent unenforceable based upon infectious unenforceability because the '842
3 patent and the '068 patent bear an immediate and necessary relation to the
4 inequitable conduct. The '842 patent and '068 patent did not face their own
5 substantive rejections over prior art and instead were only rejected based upon the
6 judicially created doctrine of nonstatutory double patenting because they were
7 deemed not patentably distinct from the claims of the '232 patent and the '842
8 patent, respectively.

9 202. The '235 patent is a continuation of the '126 patent, which itself is a
10 continuation of the '232 patent, which is a continuation-in-part of the '515 patent.
11 The '166 patent, the '617 patent and the '326 patent are divisionals of the '126
12 patent. The Applicants' inequitable conduct with respect to the '126 patent, the
13 '515 patent, and the '232 patent, discussed above, renders the '235 patent, the '166
14 patent, the '617 patent, and the '326 patent unenforceable based upon infectious
15 unenforceability because the '235 patent, the '166 patent, the '617 patent, and the
16 '326 patent bear an immediate and necessary relation to the inequitable conduct. In
17 particular, arguments for the patentability of the '126 patent, the '515 patent and the
18 '232 patent and the failure to properly cite prior art in the prosecution of those
19 patents directly affected the prosecution of the '235 patent, the '166 patent, the '617
20 patent and the '326 patent, which claim similar image sensor structures. Moreover,
21 Applicants' misrepresentations as to the priority claim of the '126 patent directly
22 affected the prosecution of the '235 patent, the '166 patent, the '617 patent and the
23 '326 patent, which claim direct priority thereto.

24 203. The '838 patent is a continuation of the '768 patent, which itself is a
25 continuation-in-part of the '232 patent, which is a continuation of the '515 patent.
26 The '059 patent is a divisional of the '503 patent, which itself is a continuation-in-
27 part of the '232 patent, which is a continuation of the '515 patent. The '483 patent
28 is a continuation-in-part of the '232 patent, which itself is a continuation of the '515

1 patent. Applicants' inequitable conduct with respect to the '515 patent, the '232
2 patent, the '768 patent and the '503 patent, discussed above, renders the '838
3 patent, the '059 patent, and the '483 patent unenforceable based upon infectious
4 unenforceability because the '838 patent, the '059 patent, and the '483 patent bear
5 an immediate and necessary relation to the inequitable conduct.

6 **IV. EACH CLAIM OF EACH OF THE PATENTS-IN-SUIT**
7 **SHOULD BE DECLARED VOID AND UNENFORCEABLE.**

8 204. Each claim of U.S. Patent No. 5,990,506 is void and unenforceable
9 because one or more of the inventors and/or the individuals associated with the
10 filing and/or prosecution of the '506 patent engaged in inequitable conduct during
11 the prosecution of the application or applications that matured into the '506 patent
12 and/or during the prosecution of its Parent Patents.

13 205. Each claim of U.S. Patent No. 6,456,326 is void and unenforceable
14 because one or more of the inventors and/or the individuals associated with the
15 filing and/or prosecution of the '326 patent engaged in inequitable conduct during
16 the prosecution of the application or applications that matured into the '326 patent,
17 and/or during the prosecution of its Parent Patents.

18 206. Each claim of U.S. Patent No. 6,549,235 is void and unenforceable
19 because one or more of the inventors and/or the individuals associated with the
20 filing and/or prosecution of the '235 patent engaged in inequitable conduct during
21 the prosecution of the application or applications that matured into the '235 patent,
22 and/or during the prosecution of its Parent Patents.

23 207. Each claim of U.S. Patent No. 6,555,842 is void and unenforceable
24 because one or more of the inventors and/or the individuals associated with the
25 filing and/or prosecution of the '842 patent engaged in inequitable conduct during
26 the prosecution of the application or applications that matured into the '842 patent,
27 and/or during the prosecution of its Parent Patents.

28 208. Each claim of U.S. Patent No. 6,570,617 is void and unenforceable

1 because one or more of the inventors and/or the individuals associated with the
2 filing and/or prosecution of the '617 patent engaged in inequitable conduct during
3 the prosecution of the application or applications that matured into the '617 patent,
4 and/or during the prosecution of its Parent Patents.

5 209. Each claim of U.S. Patent No. 6,744,068 is void and unenforceable
6 because one or more of the inventors and/or the individuals associated with the
7 filing and/or prosecution of the '068 patent engaged in inequitable conduct during
8 the prosecution of the application or applications that matured into the '068 patent,
9 and/or during the prosecution of its Parent Patents.

10 210. Each claim of U.S. Patent No. 5,949,483 is void and unenforceable
11 because one or more of the inventors and/or the individuals associated with the
12 filing and/or prosecution of the '483 patent engaged in inequitable conduct during
13 the prosecution of the application or applications that matured into the '483 patent,
14 and/or during the prosecution of its Parent Patents.

15 211. Each claim of U.S. Patent No. 6,606,122 is void and unenforceable
16 because one or more of the inventors and/or the individuals associated with the
17 filing and/or prosecution of the '122 patent engaged in inequitable conduct during
18 the prosecution of the application or applications that matured into the '122 patent.

19 212. Each claim of U.S. Patent No. 6,943,838 is void and unenforceable
20 because one or more of the inventors and/or the individuals associated with the
21 filing and/or prosecution of the '838 patent engaged in inequitable conduct during
22 the prosecution of the application or applications that matured into the '838 patent,
23 and/or during the prosecution of its Parent Patents.

24 213. Each claim of U.S. Patent No. 6,825,059 is void and unenforceable
25 because one or more of the inventors and/or the individuals associated with the
26 filing and/or prosecution of the '059 patent engaged in inequitable conduct during
27 the prosecution of the application or applications that matured into the '059 patent,
28 and/or during the prosecution of its Parent Patents.

1 214. Each claim of U.S. Patent No. 7,369,166 is void and unenforceable
2 because one or more of the inventors and/or the individuals associated with the
3 filing and/or prosecution of the '166 patent engaged in inequitable conduct during
4 the prosecution of the application or applications that matured into the '166 patent,
5 and/or during the prosecution of its Parent Patents.

6 215. Caltech, by way of Plaintiff's First Amended Complaint, has raised
7 legal and factual questions as to Canon U.S.A.'s alleged infringement of these
8 certain patents. To resolve these questions and to afford Canon U.S.A. relief from
9 the uncertainty and controversy raised by Caltech's allegations and Plaintiff's First
10 Amended Complaint, Canon U.S.A. is entitled to a declaratory judgment that each
11 claim of the '506 patent, the '326 patent, the '235 patent, the '842 patent, the '617
12 patent, the '068 patent, the '483 patent, the '122 patent, the '838 patent, the '059
13 patent and the '166 patent are void and unenforceable because one or more of the
14 inventors and/or the individuals associated with the filing and/or prosecutions of
15 these patents engaged in inequitable conduct during the prosecution of the
16 application or applications that matured into these patents and/or during the
17 prosecution of their parent applications.

18 **Prayer For Relief on Counterclaims**

19 Wherefore, Canon U.S.A. respectfully requests that this Court enter
20 judgment in its favor and grant the following relief:

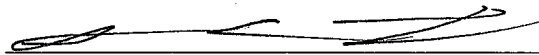
- 21 (a) A declaration that Canon U.S.A. is not infringing and has not infringed
22 any claim of any of the Patents-In-Suit alleged by Caltech;
23 (b) A declaration that all claims of the Patents-In-Suit alleged by Caltech
24 are invalid;
25 (c) A declaration that all of the Patents-In-Suit alleged by Caltech are
26 unenforceable;
27 (d) That all of Caltech's claims are dismissed in their entirety with
28 prejudice;

- 1 (e) A declaration that Caltech shall take nothing by way of its Complaint;
2 (f) A finding that this is an exceptional case and warranting the award to
3 Canon U.S.A. of its reasonable attorney fees pursuant to 35 U.S.C. §
4 285 and any other applicable statutes, rules, or laws;
5 (g) That Canon U.S.A. be awarded pre- and post-judgment interest and
6 that such interest be awarded at the highest legal rate from and after
7 the date of service of the initial complaint in this action;
8 (h) That Canon U.S.A. recover its costs in this suit; and
9 (i) That such additional relief as the Court may deem just and proper
10 under the circumstances be awarded.
11

12 Dated: June 23, 2009

Respectfully submitted,

13 ORRICK, HERRINGTON & SUTCLIFFE LLP
14

15 

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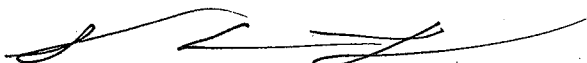
DEMAND FOR JURY TRIAL

Defendant and Counterclaim Plaintiff Canon U.S.A., Inc. and Defendant Canon Inc. hereby demand a trial by jury for all claims and issues so triable in this action.

Dated: June 23, 2009

Respectfully submitted,

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